

APPENDIX A - CLAIM AMENDMENTS

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1. (Currently amended) A device for assessing the degree of systemic perfusion in a patient, the device comprising: blood-flow sensor means, adapted to be positioned adjacent a mucosal surface within a patient's body for measuring blood flow in adjacent tissue; PCO2 sensor means, adapted to be positioned adjacent the mucosal surface for measuring PCO2 in the adjacent tissue; ~~and an indicating means operably connected to the blood-flow sensor means and the PCO2 sensor means for indicating the measured blood flow and the measured PCO2, said indicating means indicating the degree of systemic perfusion of the patient when the~~ wherein a measured blood flow in the adjacent tissue ~~that~~ is substantially lower than a normal measured blood flow and ~~the measured a PCO2 measurement that~~ is substantially higher than a normal measured PCO2 measurement is indicative of the degree of systemic perfusion of the patient; and a positioning means for locating or maintaining the blood-flow sensor means at a position in the upper respiratory/digestive tract, the positioning means comprising a holder member having a holder passage extending within at least a portion of the holder member and structured to receive the blood-flow sensor means, a portion of the blood-flow sensor means extending outside of the holder passage and engageable with the position in the upper respiratory/digestive tract.
 2. (Original) The device of claim 1, wherein the mucosal surface is in the gastrointestinal tract.
 3. (Original) The device of claim 2, wherein the mucosal surface is in the esophagus.
 4. (Original) The device of claim 2, wherein the mucosal surface is in the stomach.
 5. (Original) The device of claim 2, wherein the mucosal surface is in the jejunum.
 6. (Original) The device of claim 2, wherein the mucosal surface is in the colon.
 7. (Original) The device of claim 2, wherein the mucosal surface is in the rectum.

8. (Original) The device of claim 1, wherein the mucosal surface is in the upper respiratory/digestive tract.
9. (Original) The device of claim 8, wherein the mucosal surface is in the nasal passages.
10. (Original) The device of claim 9, wherein the mucosal surface is in the vestibule of the nasal cavity.
11. (Original) The device of claim 9, wherein the mucosal surface is in the nasal cavity.
12. (Original) The device of claim 9, wherein the mucosal surface is in the middle nasal conchae.
13. (Original) The device of claim 9, wherein the mucosal surface is in the inferior nasal conchae.
14. (Original) The device of claim 9, wherein the mucosal surface is in the choana.
15. (Original) The device of claim 9, wherein mucosal surface is in the pharyngeal opening of the auditory tube.
16. (Original) The device of claim 8, wherein the mucosal surface is in the oral cavity.
17. (Original) The device of claim 8, wherein the mucosal surface is in the pharynx.
18. (Original) The device of claim 8, wherein the mucosal surface is in the oropharyngeal passage.
19. (Original) The device of claim 1, wherein the mucosal surface is accessible by a mouth and connects with the gastrointestinal tract.
20. (Original) The device of claim 1, wherein the mucosal surface is accessible by a nose and connects with the upper respiratory/digestive tract.
21. (Original) The device of claim 15, wherein the mucosal surface is a sublingual surface.

22. (Canceled)

23. (Currently amended) The device of claim [[22]] 1, wherein the ~~positioning means is a~~ holder member is adapted to fit within the oral-nasal cavity of the patient and maintain the blood flow sensor in place adjacent the mucosal surface.

24. (Currently amended) The device of claim 23, wherein the ~~positioning means is a~~ holder member is adapted to fit within the mouth of the patient and hold the blood flow sensor in place adjacent the mucosal surface.

25. (Currently amended) The device of claim 23, wherein the holder member is adapted to position the blood flow sensor adjacent a sublingual mucosal surface.

26. (Currently amended) The device of claim 23, wherein the holder member is constructed to fit between the inside of a lip and gum of the patient.

27. (Currently amended) The device of claim 23, wherein the ~~positioning means is a~~ holder member is adapted to fit within the vestibule of the nasal cavity of the patient and hold the sensor in place adjacent the mucosal surface.

28. (Original) The device of claim 1, wherein the blood-flow sensor is a laser-Doppler blood-flow sensor.

29. (Original) The device of claim 1, wherein the blood-flow sensor is an ultrasound-Doppler blood-flow sensor.

30. (Original) The device of claim 1, further comprising a pH sensor.

31. (Original) The device of claim 1, further including a means for determining the rate of change of blood flow.

32. (Original) The device of claim 31 wherein the determining means comprises a circuit for generating a signal representing rate-of-change of blood flow.

33. (Currently amended) A device for assessing the degree of systemic perfusion in a patient, the device comprising: a blood-flow sensor, adapted to be positioned adjacent a mucosal surface within a patient's body and measuring blood flow in adjacent tissue; an indicating means operably connected to the sensor means for indicating the measured blood flow, ~~said indicating means indicating~~ whereby the degree of systemic perfusion of the patient may be deduced when the measured blood flow in the adjacent tissue is substantially lower than a normal measured blood flow; and a sensor holder with an inner portion and an outer portion, said inner portion having a shape generally corresponding to the shape of the area that is adapted to fit under the patient's tongue, said holder forming at least one holder passage extending from said outer portion to said inner portion, wherein the sensor is located within the holder passage.

34. (Previously presented) The device of claim 33, wherein the sensor holder has an upper surface that is adapted to support the tongue of the patient.

35. (Original) The device of claim 33, wherein the outer portion has a slot for receiving the patient's frenulum, and the holder passage has an inner end lying on one side of said slot.

36. (Original) The device of claim 33, wherein at least a portion of the holder is comprised of an elastomeric material.

37. (Currently amended) A device for assessing the degree of systemic perfusion in a patient, the device comprising: a blood-flow sensor, adapted to be positioned adjacent a mucosal surface within a patient's body and measuring blood flow in adjacent tissue; a pH sensor, adapted to be positioned adjacent the mucosal surface for measuring pH in the adjacent tissue; ~~[[and]]~~ an indicating means operably connected to the sensor means for indicating the measured blood flow and the measured pH, ~~said indicating means indicating the degree of systemic perfusion of the patient when the~~ wherein a measured blood flow in the adjacent tissue that is substantially lower than a normal measured blood flow and the measured a pH measurement that is substantially lower than a normal measured pH measurement is indicative of the degree of systemic perfusion of the patient; and a sensor holder having a holder passage extending within at least a portion of

the sensor holder and structured to receive the blood-flow sensor, at least a portion of the blood-flow sensor exposed from within the holder passage and engageable with the mucosal surface.

38. (Currently amended) A device for assessing the degree of systemic perfusion in a patient, the device comprising: a blood-flow sensor, adapted to be positioned adjacent a mucosal surface accessible by a mouth and connecting with an upper respiratory/digestive tract in a patient's body and measuring blood flow in adjacent tissue; an indicating means operably connected to the sensor means for indicating the measured blood flow, ~~said indicating means indicating whereby~~ the degree of systemic perfusion of the patient may be deduced when the measured blood flow in the adjacent tissue is substantially lower than a normal measured blood flow; and a sensor holder adapted to hold the blood-flow sensor adjacent the mucosal surface in the upper respiratory/digestive tract ~~mucosal surface~~, the sensor holder comprising a flexible member having a sensor holder passage with the blood-flow sensor disposed therein, at least a portion of the blood-flow sensor being exposed from within the sensor holder passage and structured to engage the mucosal surface.

39-60. (Canceled)

61. (Currently amended) A device for assessing the degree of systemic perfusion in a patient, the device comprising: a blood-flow sensor adapted to be positioned adjacent a mucosal surface within a patient's body and measuring blood flow in adjacent tissue; a pH sensor adapted to be positioned adjacent the mucosal surface for measuring pH in the adjacent tissue; a PCO2 sensor adapted to be positioned adjacent the mucosal surface for measuring PCO2 in the adjacent tissue; ~~[[and]]~~ an indicating means operably connected to the blood-flow sensor, the pH sensor and the PCO2 sensor for indicating the measured blood flow, the measured pH and the measured PCO2, ~~said indicating means indicating the degree of systemic perfusion of the patient when the wherein a measured blood flow in the adjacent tissue that is substantially lower than a normal measured blood flow, and the measured a pH measurement that is substantially lower than a normal measured pH measurement, and the measured a PCO2 measurement that is substantially higher than a normal measured PCO2 measurement, is indicative of the degree of systemic perfusion of the patient; and a positioning means for positioning the blood-flow sensor adjacent~~

the mucosal surface, the positioning means comprising a sensor holder having a holder passage extending within at least a portion of the sensor holder, wherein the blood-flow sensor is located within the holder passage, at least a portion of the blood-flow sensor being exposed outside the sensor holder and structured to engage the mucosal surface.